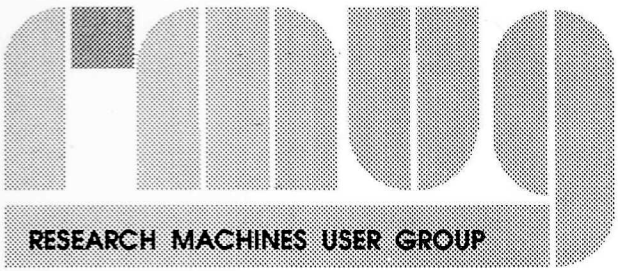
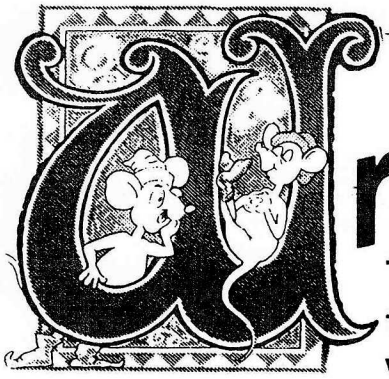
RM User

Volume 6:6

February 1992





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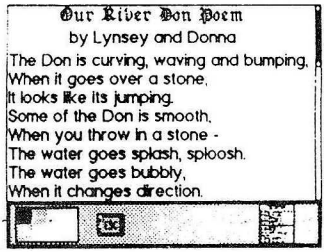
Our River Don Poem
by Lynsey and Donna
The Don is curving, waving and bumping,
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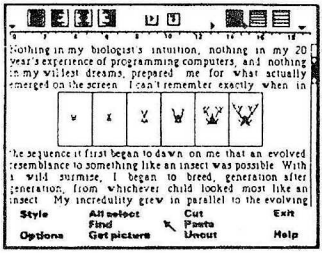

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SPA

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Help Line

According to the constitution the User Group exists *to promote the interchange of information and ideas between users of [RM] microcomputers.* There are two main ways in which this can happen. One of these is by using the magazine as a forum in which letters, articles or just short thoughts can be expressed and shared with other members. The other, and the more immediate, is to use the help line.

The User Group contains a great body of expertise and the Help Line exists as a channel for spreading knowledge and especially answers to your problems.

How does this differ from RM's Customer Support telephone service? Firstly, you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are just bound to hit problems). Secondly, RM don't claim to have great knowledge of products which they don't produce such as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in depth support on using the the packages. We, on the other hand, can. Most of the people whose phone numbers are listed on page 42 are using the contents of the educational software library on a daily basis. We may have met exactly the problem you have just encountered.

If you are in difficulty, please feel free to ring anybody on the Committee; John and Helen Williams have an answering machine so you can always leave a message there. It is a great help if you are having a problem doing something using your computer if you can be next to it when you phone because it may then be possible to talk you through a solution over the phone.

If your problem is not urgent, or you think it may be difficult to explain over the phone, then do please write to the Editor with your query. I will either reply to you directly or pass your query on to a better person to solve it or publish your letter in the next magazine as a request for help.

If you have had a problem which you have solved for yourself then please share your knowledge; your solution is quite likely to be useful to someone else, even if you think it is trivial; remember that many of our members are new to using RM equipment.

Finally, you can also telephone Keith Whiddon on 0403 217339 regarding Nimbus problems or Tim Philips on 0284 706233 regarding PC186 or 380z problems. Both numbers are home numbers and we are grateful to Keith and Tim for allowing their numbers to be published.

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RM User 7:1 ..... 30 March 1992
RM User 7:2 ..... 8 May 1992
RM User 7:3 ..... 1 June 1992
RM User 7:4 ..... 11 September 1992
RM User 7:5 ..... 6 November 1992
RM User 7:6 ..... 22 January 1993

Please note that these are the dates by which copy should reach me. The magazine will normally reach you about three weeks after this date (depending on how fast I type!)

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News and Editorial

The big news this month was the launch of RM Net LM at BETT; see my separate article for details of this exciting new product.

RM Net LM was just part of the launch of the RM InSITE programme. This is an attempt by RM to provide what they refer to as an ISIS - an Integrated Schools Information System in which RM will not just provide hardware and software but also provide the support necessary for use of the package in education. The first part of the package is a sophisticated network which is easy to use, both for end users and the administrator. The next is to make sure that the package can be used by staff in schools. To this end the RM Courseware provides training materials for staff and RM Training will be offering INSET on a variety of subjects. Cross curricular working is made easier by choosing Windows applications so that, for example, spreadsheets developed in Maths can easily be adapted for use in Geography and then the results integrated in a report produced with Word. A further part of the InSITE package allows secure access to data held centrally but needed by teaching staff at remote parts of the network.

There isn't room here to describe the whole package; further details are available from RM on 0235 826000. It is certainly a welcome move and marks out RM as a manufacturer which is not only interested in selling as many boxes as possible into education but actually making sure that good education results. I hope it is a success.

The new Educational Software Library has also been announced. The significant changes are the addition of Word for Windows version 2 (1.1 remains for PC186 users) and Micrografx Draw, which seems to be a good object oriented drawing package. Micrografx claim, of course, that it is better than Corel Draw (which is the market leader) and it certainly has the advantage of working all the time in colour, rather than using a wire-frame screen and a preview screen. It has less fonts than Corel, which is a pity; if you're designing posters or displays you don't want to use a lot of fonts on one piece of work but it's nice to have different fonts for different jobs. There is also an EMail package included and National Curriculum Courseware modules for Key Stage 3 in English, Maths and Science.

If you look through magazine adverts you can see 486 computers complete with colour monitor for about £1200. RM charge rather a lot more for a 486 server but remember to include in the price the Educational Software Library which comes with it. Putting a value on the package is hard but getting the best educational discounts would probably give you a price of £50 - £100 per user per package; there are 4 major Windows packages licensed for 16 users

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and 1 for 10 users, plus Windows itself (say £25 per user) plus FlexiWrite, FlexiCad, Keystroke, PaintSPA and RM's own languages. A reasonable estimate must be at least £5 000 for this. You should also allow something for the cost of OS/2 and Lan Manager. Now consider that a 486 based server with 16Mb of memory, and a 340Mb hard disc and all this software will cost £5 595 and the price doesn't look bad at all!

RM have recently announced a new 386SX model running at 20MHz (compared to 16Mhz) and at about £50 more. This is certainly a welcome move; I had hoped to see a 486SX launched but obviously RM don't feel this is appropriate. This might not be unreasonable; the 486SX has been described as "brain dead" (A 486 DX has a maths co-processor built in; a 486SX has the co-processor disabled, making it little better than a 386. Intel, on the other hand, have been advertising on TV to try and persuade people that the 486SX is a good buy because the boards for it have an upgrade processor socket which increases the speed of working. At the moment such processors seem unobtainable so the 486SX is probably not worth the cost just now).

Acorn recently published the results of an independent survey which claims that 74 per cent of primary computer purchases and 42 per cent of secondary were from Acorn; RM scored 21 and 26 per cent respectively. I don't know if these figures are by volume or value but by the time other makes of PC are added a figure of 48 per cent is reached which is more than the total of all Acorn machines. I know that the Archimedes is technically a brilliant machine (and the A5000 is superb) but it isn't what the majority of computer users work with and I think schools who don't let their pupils work with industry standard equipment do them a disservice.

ICL are trying very hard to get into the school marketplace. They too have released a version of Lan Manager with a Windows front end and are bundling a quite impressive software pack (based on Lotus products such as 1-2-3 and Ami Pro) with their computers. Less impressive was their recent newsletter; a photographer had obviously been told to get photos of computers being used in schools. Unfortunately it seems that no-one checked the pictures because 2 were of Nimbus computers and one of BBCs! The DES also featured RM computers (and no others!) in their recently published booklet *Your Child and the National Curriculum.*

There were more people showing CD ROM systems at BETT and some interesting new CDs. I've mentioned Hutchinson's Encyclopedia before but the new version includes many more pictures (1 500 in total) and more than 250 sound clips. It will be available in "early spring" at a price of £149 standalone with upgrades available for existing users. Details from Attica Cybernetics on 0865 791346.

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SPA have a number of useful extras to go with their software. *Let's Make News* is a package to help make the best of NewSPAper and includes a 2 hour video (split into a 45 minute documentary and 6 short items). *Ideas in PaintSPA* gives a booklet full of ideas and a supporting disc of illustrations for use. *Investigations with Omnigraph* is aimed at students in years 7 to 11 and contains two booklets, one for students (containing 150 investigation starting points) and one for teachers which also includes a disc of 200 examples. Further details of all these from SPA on 0926 422959 (and if you haven't got one of their catalogues then ask for one; they do some really good software!)

I'm always worried about adding more data handling packages to the system; I'm not sure that it's helpful to work with too many. In the past I've had Quest, Grass, DataEase and Superbase on the network but one package I've never really worked with is Key. It has a dedicated band of followers, however, and Key Plus 2.0 which is now available runs under Windows and certainly looks good. The best thing about Key is that many data files are available for it and most of these come with booklets of ideas as to how the files can be used in teaching. Key Plus ranges in price from £65 for a small primary school to £180 for a large secondary school. Data files vary in price but are mostly £15 to £20. Details from ITV Association on 071 247 5206.

The RSA have announced a new test, the Word Processing Functions Test, which is computer based and designed to show whether a user can work through all the basic functions of a Word processing package. The user is asked to carry out various tasks (loading, saving, printing, underlining, indenting etc) on a screen which looks like the word processor. At then end you are told how many tasks you got right and a certificate can be printed out. It's available for a number of wp packages, including Word 5, WordStar and Word Perfect but not, as yet, Word for Windows. It's easy to use and could possibly used to assess whether a student is ready to be entered for a word processing exam. Details from Amanda Edgar at the RSA on 0203 470033. Also new is a Spreadsheets exam which looks useful as an addition to the existing Word Processing and Desktop Publishing exams. With the well established CLAIT assessment the RSA now offers a good range of tests in IT which I think are very welcome. I'm not a fan of GCSE Computer Studies because I don't know that it has sufficient relevance for most pupils but most pupils do need to be able to use computers and if they can gain certificates proving their competence from a respected body like the RSA then I think that this is a very worthwhile achievement.

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LogoBook from ILECC allows the use of Logo to be taken much further than previously possible by allowing all sorts of hypertext style applications to be produced. It links in with Gallery, a Logo extension from SPA which is included with the package, and some public domain extensions to Logo. I haven't seen it but it sounds excellent; more details from ILECC on 071 735 9123. (See also, Peter Butt's article on page 9 in this issue on the uses of Logo)

A mouse is more or less essential for working with Windows but if you are using a portable or notebook computer then the mouse can be unwieldy. Many manufacturers have come up with alternatives to the mouse which may be more usable; one of Logitech's offerings is the Trackman Portable. Logitech make excellent mice (they make the ones which RM sell with their name on top) and this looks like a good idea. It's basically an upside down mouse with the buttons cleverly arranged. It can sit on the side of the keyboard so that your thumb turns the ball and your index presses the "left" button. It costs £79 and comes complete with cables for all possible mouse sockets. More details from Edhitec (0423 871027).

A perennial problem with Windows is fonts. Windows comes with a set of bitmap fonts in a small range of sizes. If you choose one of these then the screen display looks good. Choose a different one and either the screen display looks wrong. For example, if you choose 11 point then you will see 12 point on screen; choose anything bigger than about 18 point and the font that you get is the nearest multiple of a smaller font - 48 point is 12 point magnified 4 times and so on. One solution to this is to use programs like Adobe Type Manager which generate scalable fonts; they store a mathemetical outline of the font and can stretch this smoothly to any size. I've not been very impressed with ATM; it looks OK on screen but I didn't find it that good for printer support. A new package from Zenographics called SuperPrint seems to help with this. It generates good looking fonts "on the fly" (ie, it doesn't have masses of font files cluttering up your disc but makes them as they are needed) for the screen and the printer. I've been trying out the demo version which is fully functional except that it prints a banner over your work. It certainly seems good, the text output on an Epson LQ 850 was excellent in a variety of sizes and the speed was acceptably fast.

The system will be a boon if you have a number of different printers because you simply set up your work for the SuperPrint driver and then when you are ready to print you select the SuperPrint driver for the correct physical printer. This gets round the problem with normal Windows that if you set your work up for one printer and then want to go and print it on another then the fonts are likely to be different.

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For example, on my school network I have a Deskjet 500 printer in the library (it's quiet as well as high quality) and NEC dot matrix printers elsewhere. It's a real problem if you compose your work for the NEC and then print it on the Deskjet. SuperPrint seems to provide an answer. Windows 3.1 may address some of these problems when it introduces TrueType scaleable fonts but for now it's necessary to look for other solutions. Further details and the working model from Edhitec (0423 871027)

I've been sent details of the "largest infotainment system in Europe" which is essentially a large bulletin board giving access to state of the art games, education or business. Cyberspace Gateway offers a huge range of facilities; if you've got a modem and want to try it out then call 071 580 6433with your mode set to a speed from 300 to 2400 baud or call (voice) on 071 373 1552. The first 30 days are free; after that it costs £10 per month plus the cost of your phone calls.

If you are writing to me (Steve Rochford) please note that you can use the Freepost address (RMUG, FREEPOST, London W12 0BR) or my home address (46 Ollgar Close, Shepherd's Bush, LondonW12 0NG) All the letters come to the same address in the end; the first doesn't cost you anything but takes longer. Please don't stick stamps on letters to the Freepost address; the Royal Mail read the postcode only so we still pay the postage, even if you put a stamp on!

Finally, I try to use a consistent set of fonts in the magazine but I've never bothered to tell you what they are. Most of the magazine is set in Palatino and the author's name is given at the top, with the exception of the News and Editorial which has no name but is written by me. I often add comments to articles and I put them in Helvetica so that they stand out and you will know that they are not part of the article. Finally, I print program listings in Courier which is a mono-spaced font and is easy to copy from because lines which should be the same length on screen will be the same length on paper.

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LOGO Present & Future

Peter J Butt

The Present State of LOGO

The inclusion of 'LOGO' in the National Curriculum has increased interest in the language, but this has not always been for the best. Logo means 'word' and so should be all about encouraging the use of correct concepts, but generally Logo has been debased and is frequently used to mean one of two different things neither of which is 'Logo'.

The first, Turtle Geometry, is a geometry based on straight movement and a turn and uses the commands; FORWARD, BACK, LEFT, RIGHT. The second, Turtle Graphics, involves pictures and uses commands such as; SETCOLOUR, FILL, PEN UP, PEN DOWN.

Logo on the other hand is a highly interactive computer language developed at the Massachusetts Institute of Technology for educational use, which includes lists as 'first class' data objects.

It was pointed out to the National Curriculum Council that instead of using the terms LOGO or Turtle Graphics, to be correct, the National Curriculum Mathematics documents should use the term: 'Turtle Procedure Notation'. TPN for example is used in DART and SPA's Fractal packages, as well as the computer languages LOGO and EDSCHEME, both of which have built-in turtle geometry and graphics capabilities.

The Future of LOGO

Research Machines were the first UK company to commission the writing of a Logo interpreter, (from the University of Edinburgh). There have been extensions written and version 2.0K has a music capability. Likewise, the Bulgarians have developed a Euclidean geometry extension for their Logo.

The major Logo development since those early days has been the Canadian LCSI LOGO-Writer, which will run on Nimbus PC286/386 and under IBM emulation on a PC186, (obtainable from Valiant). LOGO-Writer is a wordprocessor with full Logo capabilities and has taken Logo into the classroom from the computer room. LCSI are also developing database, communications and spreadsheet applications with Logo capabilities.

Following initial work in the USA, object orientated Logo's are being prototyped in Belgium, Italy and Hungary. The only unique UK development of Logo has been primitives to handle overlay keyboards such as the Concept Keyboard.

Unless we plan for the future, there will be no future.

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Three Present Day Uses of LOGO

Functional Computer Programming - a 6th form General Studies Course

At an Oxbridge entrance interview for Computer Science, the fact that my pupil used this style of programming was greeted with enthusiasm. The Oxford University Maths Faculty run courses using SCHEME, a dialect of LISP, from which Logo derives. HMI Report: Computing as a Specialist Subject 1987-89, contained the sentence: Opportunities for introducing such concepts as functional programming languages and declaritive styles of programming to students who would have been able to benefit from these were being missed. The rules for a functional style of computer programming are that the given problem is divided into sub-procedures and does not use GOTO's or assignment statements.

In this programming style, programs are expressed in the same notation that mathematicians use, ie h(g(f(x))).

Given a procedure EUCLID that finds the Highest Common Factor of two numbers, to find the HCF of the three numbers 42, 18, 128 one writes:
EUCLID (42 (EUCLID 18 128))

To generate the data to draw a bar chart, given that procedure DIE generates n random integers in the range 1 to 6.

If DIE 10 generated: [3 1 1 4 3 5 5 6 3 6]

SORT DIE 10 would result in: [1 1 3 3 3 4 5 5 6 6]

FREQUENCY SORT DIE 10 would result in:

[[1 2][3 3][4 1][5 2][6 2]]

DISTRIBUTION FREQUENCY SORT DIE 10 results in:

[[1 2][2 0][3 3][4 1][5 2][6 2]]

Tony Durham described pure functional programs as being like the perfect guest: they bring everything they need, take all their belongings away with them, and leave the place as they found it. What is more, they live out of their suitcases while in residence. It is not that you should never unpack, just that if you do, you must be careful and orderly. In a functional language, these habits are built in the language itself.

Of the computer languages accessible to schools, only Logo can be used in a functional programming style. Please note, Logo is far more than just turtle geometry or graphics. Logo is about list processing and as such generates results as do functions, whereas, Turtle microworlds generate lines, which are side effects caused by moving the pointer from one place to another

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Generating Situations for A-level statistics courses

One style of teaching that I use is to try to provoke the pupils to comment about what they think is happening in a given situation, and then to ask and analyse, what they really mean by their comments. A computer can be used to create the situations and has the advantage, that those situations can be controlled much more than 'real life'.

Logo has a START.LGC file which allows the language primitives to be changed. For example, if the START file contains the following procedures, when a pupil types right 90, the turtle will not move as they expect but a function of what they expect.

```
nearly 'n
result  - some function of :n
my_right 'n
if chk_num :n [$right :n+nearly :n] [say 'right]
chk_num 'obj
if numberq :obj [result 'true]
[type :obj type[\20]
 type [is an unsuitable input for]
 type [\20] result 'false ]
alias 'my_right 'rt
alias 'my_right 'right
bury [right nearly chk_num]
```

The $right command, refers to the real Logo primitive 'right' and chk_num is to intercept input errors and to generate Logo-like error messages in conjunction with the calling procedure.

Logo is started in the same way for all users but in fact, we can each have our own version of START.LGC, theirs with *nearly* involving a random element.

At the beginning of their course pupils are introduced to Turtle geometry, forward, right etc, and we draw a square:

```
repeat 4 [ fd 50  rt 90 ]
```

but to their consternation, they do not get the same shape as I do. "What is happening?". Eventually, words like 'biased', 'random' and even 'pseudo-random' are said. "What do you mean by that word?". So our course starts with the next few lessons spent discussing those words. Subsequently, "How do you test to see if the turtle is biased or being randomly affected?". So ideas are introduced of:

- ❑ sampling and the larger the sample the better;
- ❑ distributions and descriptive statistics;
- ❑ hypothesis testing with the chi-square 'goodness of fit' test to try to find what the unmentioned *nearly* generates.

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Initially using:

```
repeat 50 [seth 0  right 90 type heading type [\20]]
```

Later when covering statistical inference, testing for the difference of two means can be introduced by considering if each pupils *nearly* is the same; it is easy enough to change some of the pupils', *nearly*!

I like to complete my courses with the topic of the 'sums of random variables' for the ideas behind this topic should at least allow the pupils to draw better squares. It is an important statistical concept to realise that they will never be able to draw a perfect square. They write:

```
right_10 'a
repeat 10 [right (:a/10)]
square
repeat 4 [ fd 50  right_10 90 ]
```

With one group, it was only at this stage that they realised that Logo's FORWARD, had also been given the treatment. At the time, the air became quite blue!

SHAPE AND SPACE Attainment Target 4, Level 10 Maths National Curriculum
The example:

Given that two ships leave a small port and move at constant speed in the direction 060 and 100, respectively, and that the first ship is moving at 20km/h and the second at 24km/h, find the distance between the two ships 30 minutes after they leave port.

The following sequence of commands is an alternative to the cosine rule:

*tell 1 seth 60 fd 30*2 make 'p pos*
*tell 2 seth 100 fd 30*2.4*
*say 10 * first towards :p*
This type of solution can introduce parallel processing and hence the creation of a relative motion micro-world which is uniquely possible with RM Logo. But when I did, one of our double A-level mathematicians told me that I was, 'cheating'!

Peter Butt is Director of Computing at City of London School, London, EC4V 3AL and is also a Member of the British Logo User Group Committee and may be contacted on BT Gold 01:YNC055. See page 8 for some information about LogoBook which offers other ways of using Logo.

Day Meeting

Research Machines will show RM Net LM at a meeting at Methodist College, Belfast on Saturday 29 February 1992.

The meeting will take place from 10.00am to 3.00pm and includes the following:

The Northern Ireland launch of RM Net LM

Workshops on the folloiwng areas:

- ❑ Technology and Science
- ❑ Network Management
- ❑ Music
- ❑ CD ROM
- ❑ The Microsoft applications software packages
- ❑ The CLASS project (Computersied Local Administration System for Schools)

Please contact Richard Naylor at Methodist College, 1 Malone Road, Belfast for further details.

The meeting is sponsored by RM and CEM.

Annual General Meeting

The Annual General Meeting of the RM User Group will take place on Saturday 28 March at the Inner London Educational Computing Centre, John Ruskin Street, London SE 5 0PQ.

The meeting will start at 10.30am and will include reports from the committee, a presentation by RM and various demonstrations.

You will be sent fuller details nearer to the date.

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Words of Warning

David Palmer

When I wrote an article for RM User 6:4 about upgrading, it was a very cathartic experience. When the article was printed I felt very embarrassed because I had moved on to newer and greater frustrations and those earlier ones looked very petty in retrospect. I also had that strange feeling you get on hearing your own voice coming from a tape recorder - is that really me?

I continue to have mixed feelings about RM; they do some things so well and in other areas I feel let down. My biggest moan is about printing from Paintbrush in Windows. I read somewhere in the pile of handouts (still no index!) that you could only print in colour to a Paintjet printer. I had a superb laser printer and a 24 pin colour dot matrix printer. The lattter produced washy colour even from a new ribbon and multiple sheets of gibberish if the switch box was in the wrong position and the file for the colour printer went to the laser by mistake. I had no money left in my budget but I heard someone in our office say that they were going to buy a laser printer. "Please take mine", I cried, "and buy me a Paintjet in return". They agreed and I went away thinking how much easier it would be to have one printer to do all the work.

Our assistant bursar said that he had heard that Paintjets bled into the paper unless you used special, expensive paper. I asked for some samples and they looked pretty messy. Then I heard that Kodak were selling a Paintjet engine iun a new housing with new inks and a sheet bin. I asked for a sample and it looked much better. I ordered the printer with a promised 24 hour delivery. It finally arrived a month later. Then we went to print from Paintbrush and got a message on the screen "Insufficient memory to complete this operation". Several teachers still talk about the roar of anguish that echoed down the corridors that day. I called Customer Support and they said "Oh, yes, you can only print in colour from Paintbrush to a Paintjet printer from a 286 or better with at least 2Mb of RAM." Only one of my machines meets that specification. My point is that the sentence in the handout should have said that instead of giving only half the story. The office is delighted with my laser but I am finding the Kodak (Diconix 330C very expensive to run. The black cartridge sometimes lasts only 2 days and is £10 a go. I had thought that I could use a third party refiller but they don't do one for this printer. I also don't like the fact that the ink gives up when the bladder is about half full.

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My server is being upgraded to a 386 with 8Mb of RAM and a 300Mb hard disc (from a 286 with 5Mb and 60Mb hard disc) to try and run Windows better. I think that RM have done a good job in getting Windows 3 to run on PC186 machines but they need to issue a bulletin or talk carefully to people who want to buy Windows and explain what it can and cannot do on various machines.

From my experience it runs functionally but slowly on a PC186 with 1Mb of RAM. I have 21 of these in a 25 station network. I am loath to try and expand these machines since RM admit that no new software will be issued for them. I have had perhaps 20 or 30 crashed machines since starting to use Windows 3 in September. None of these machines will print in colour from Windows. It is not practical to run Windows on a 25 machine network with a 60Mb hard disc. You need to be aware of the hidden and read-only ~WOA0000.TMP files that get left behind or you will rapidly run out of disc space. I had two similar sized groups doing similar work for 6 weeks, one using Windows and one not. The Windows group used about 6 times the storage space to hold the same sort of data, hence my move from 60 Mb to 300Mb. Paintbrush is a very quirky beast; looking back I spelt it Painbrush earlier; a Freudian slip, I believe. I don't know if it's any good on a 386 but it does very odd things on a 186 or 286 in real or standard mode. I don't know if Microsoft are going to upgrade it but I have a feeling that any fixes will only be for a 386 or better machine. It is ironical that the graphics program is the weakest part of a graphics based interface.

I've published the above comments because I think they might help others to not make the same mistakes. Windows 3 on the PC186 is something of a "singing dog" syndrome program; you're surprised it does it at all, you don't expect it to do it well. To be fair to RM, they have provided a means for users with older machines to use Windows in a reasonably satisfactory way. The big problem is that the program runs in 'Real' mode. This means that much of the Windows software being written now (which require standard mode and hence a 286 processor or better and more than 1Mb of memory) simply won't run and some programs which do run are pretty awful (Paintbrush seems to be a good example!)

What can be done? Firstly, avoid Windows if you don't really need it on a PC186. For painting I would strongly recommend PaintSPA (from SPA on 0926 422959) It has more colours than Paintbrush, runs well on a network and supports a range of colour printers (including the Paintjet so I suppose it will work with the Diconix). It may not have all the features of Paintbrush but it works and I think that that is probably more important!

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If you are going to use Windows on a 186 network (and it is possible) then you really do need the biggest possible hard disc on your server. RM can upgrade the machine at a price but you might also consider adding an external hard drive; Cumana (0483 503121) are worth consulting for this. You should also make sure that your server has as much memory as you can afford and this is set up as a cache using Smartdrive; it really will make a difference.

If your PC186 has 1.5Mb of memory then set up a 512kb silicon disc and use this for temporary files (on a TN this will be drive C so you need the line:

```
SET TEMP=C:
```
in P:\WIN.BAT.

Printing is a perennial nightmare for network managers (and many other users!) David is quite right in thinking that having just one printer for all your requirements is the best way of working. You then don't have to worry about selecting the correct printer driver, everything just works. There is then the problem, however, that most colour printers have very expenisve consumables. On a network using two printers you should try and connect them to separate sockets on the server (one serial and one parallel) Suppose that you have a 24 pin dot matrix for black and white printing and a Paintjet for colour work. Make the 24 pin the first public printer and the colour printer the second public printer. They are then treated by users as LPT1 and LPT2. In Windows set up the printers properly (24 pin on LPT1, colour on LPT2) using the Print Manager batch file. When a user prints from Paintbrush they will only be able to send colour data to the colour printer and black and white data to the black and white printer. No more wasted paper! What do you do if you only have parallel interfaces on your printers? Buy a serial to parallel converter costing about £50 or buy a second parallel port for your server (but make sure that it is for an AT style machine; an XT type 8 bit card is no use).

Another idea to help with printing problems is to set up one machine with a local printer and simply get users to do their printing on that machine. This will be faster and less taxing on disc space on the network server (spool files in excess of a Megabyte are common from Windows applications, especially when printing in colour!)

Ultimately the problem is that we are trying to use a machine first sold in 1985 to run software from 1990 and later. It's probably only in schools that machines are kept for such a long time (and User Groups; this magazine is produced using PageMaker on a PC186 which until recently had only a 10Mb drive; thanks to Colin Watkins at RM for its new 20Mb disc!) There won't really be any new software that runs in Windows in real mode so we've just got to make the best of what we've got; if that means not using Windows then so be it.

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Microsoft Works for Windows & Microsoft Publisher for Windows. Edhitec can supply all Microsoft Educational products at their special Educational prices. For example, PC Works for Windows & Publisher for Windows are £75 a single copy (£499 per 10 pack for Works). Send for leaflets.

NetLog This is the program Network Managers have been waiting for! It records all RM (Net2 or Net3) network user sessions with details such as time of log on/off, machine used, abnormal log offs, user id etc. then the Manager's program will report either the full data or extracted statistics such as machine usage, user log on, total/average time and output to screen/printer or via CSV files for your own manipulation. For security reasons alone, can you afford to be without this for only £29.50? Demo disk / Leaflet available.

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XTree Gold version 2.5

Steve Rochford

This is the latest version of the excellent file management program from the XTree company. If you've never heard of it before then you can think of it as a much enhanced version of Windows' File Manager. Why might you need it? If you have just one computer at home then you might make do with File Manager (after all, it is included in the price of the machine) but XTree makes life easier. If you manage a network then I would say that it is essential. What can it do?

When you start the program it will search the disc, looking for all directories and files. (It only needs to do this the first time you run it. When you quit you can force it to save the current structure so that this is re-loaded quickly when you next start). It then shows a simple representation of the tree structure on screen and shows the files in the current branch of the tree. You can easily move through the tree using either the keyboard or the mouse until you get to the directory you want to look at.

When you've found your directory you can, for example, view files (and not just as hex numbers or some vague text representation; XTree recognises many file formats, including many word processors, databases and spreadsheets). In auto-view mode the screen splits in two. On the left is the list of filenames in the current directory and on the right is the start of the current file so that you can see what it contains. This is excellent for finding lost files or working out what the obscure filename means. (When I save files I give them names which are meaningful; it's just that a few weeks later the meaningful name now looks like a random group of letters!) You can also move files to other directories, copy them (either to another directory on the same disc or to another disc), rename them or delete them.

One of the powerful features is the ability to tag groups of files. For example, I clean up the network at regular intervals by getting rid of all the old TMP, BAK, $$$ etc files. In XTree I can set the files listed to just those I want to get rid of, set the display to Global (this shows all files in the tree, not just those in the current directory) and then tag them all. It's now easy to just delete all the tagged files. Doing this while people are working on the network can be a bad idea; Windows needs the .TMP files while it is running, for example, so to prevent this I set the display to be sorted by date, change the file display to show the date stamp on the files and untag those with today's date. I then know that it is safe to delete the rest of the files that are still tagged (we don't have anyone working past midnight!)

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A new feature in this version is the ability to recognise many picture formats, including .BMP, .PCX, .TIF and .LBM files. This covers the pictures made by most of the programs made on my network. One day recently my network contained some 50Mb of such files (and out of a total of 200Mb of disc space that is quite a lot). Until I got Xtree there was no easy way of finding out if these were masterpieces which needed keeping or just some mindless scribblings so I used to back them all up and then delete them if they were more than a month old. This worked but it meant that I got lots of backup tapes of work that would probably never be wanted. With XTree I can now look at the pictures and delete the ones that are not worth keeping, saving a lot of disc space.

XTree will find hidden files and display them normally. You can, if necessary, change any of the file attribute bits so that normal files become hidden or vice versa and so on. When deleting or copying files XTree will not remove read-only or hidden files but it is possible to set the files to read-write and unhidden before trying to delete them with just a few key presses so this isn't a problem. It won't delete empty directories (unlike RMTREE) unless you specifically tell it to but you can remove whole branches (using the rather nice Prune command). Similarly, you can Graft a branch from one part of the tree to another with ease, allowing your disc to be tidied up quite simply.

If you have a large disc with many files then it will take XTree quite some time to read the whole tree and its files. You can specify when it starts that it should only read the directories and this can save time and memory (my server, for example, has over 1 100 users, each of these has a directory and all those who use Windows have a TEMP directory below this; a total of more than 1 500 directories containing nearly 10 000 files) When you want to look at the contents of a directory you simply press the + key to read the files; pressing - collapses the branch, releasing some memory.

XTree can also handle files compressed in Zip format. If you've not met PKZip, it is a shareware program which will take a group of files and then compress them, storing the results in one file. A considerable amount of commercial software is now distributed in this format, saving the number of discs and making installation simpler (XTree is one of the programs distributed in Zip files, as are the Norton Utilities). XTree allows you to look at the list of files stored in an archive, view individual files, remove them from the archive, add new files to the archive and generally manage the archive in an easy manner.

You can also use XTree to set up menus for launching programs; useful if you don't use Windows. It has a built in editor, 1Word, which is good enough to be a word processor. It uses WordStar like commands so if you know these there's no problem but even if you don't it does have menus which are easy to use. It can create batch files automatically for applications (they're fairly simple, simply making the necessary directory changes, but it's a nice touch). There are more features which I rarely use and tend to forget; the on-line help is good, however, so when you've forgotten which key to press it's very quick to find the answer in help.

Does it have any problems? None that I can see for a standalone user. You can get most of its facilities either in programs like File Manager or in shareware programs but Xtree brings them all together. For a network manager its only limitation is the number of directories and files with which it can cope; on my network it gives up after reading the first 9 000. This release of XTree has shortened my wish list, I hope the next release includes support for extended memory to store the data. It's also not very fast at reading some picture files and some times gets them wrong (what should be on the right ends up on the left with the left shifted to the middle). All in all, though, it's a program well worth having. It costs about £60 if you shop around or you can upgrade from version 2.0 for £15; contact Objective Integration on 0784 441010 for details.

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Newman Software

Rembrandt
The most exciting art package to run on the Nimbus!

This brand new program (written by the same author as *Caxton* and *Caxton Press*) has extensive features, many of which are not found in any other art package.

The program is an advanced but easy to use mouse-driven graphics package which provides a wide range of flexible screen tools and image manipulation effects for producing many different kinds of art/design work on the computer screen and in printout form. It is designed to give the user access not only to the inherent graphics capability of the Nimbus but also to a range of non-standard artist oriented features such as curves, textures and perspective modelling.

Rembrandt is specifically desgned for user-friendliness, and an important element of this is that all the screen effects can be tried out before committing them to the work in progress. For example, when drawing curves, insted of having to specify a particular radius or angle of arc in advance, the curve can be manipulated at will around the screen and positioned exactly, or abandoned altogether.

The program offers the artist imaginative and exciting features not found in any other painting program.

Price: £30 + VAT or LEA licences available.

Grass en Français
Grass auf Deutsch

The Grass database program is now available in both of the above languages. All screen prompts, error messages, input routines (Query and Editor) have been translated. Price £20 for either version or £32 for both. From Newman Software, Newman College, Bartley Green, Birmingham B32 3NT

Simply Spreadsheets

A book of problems and investigations that can be solved on a spreadsheet. Topics cover data processing, number patterns, mathematical modelling and problem solving. Available for £7.20 (inc. p&p) from KW Publications, 42 Compton Drive, Streetly, Sutton Coldfield B74 2DB. A disk of all the files refered to in the book is also available for £7.20 (Nimbus Grasshopper and Excel versions)

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First Impressions

Janet Quincey

How much I enjoyed my first RM User Group training weekend and how valuable how found it. The surroundings were comfortable, the food plentiful and the lectures good, but most of all I benefitted so much from the the kindness, friendship and abundance of help from fellow delegates, the User Group Committee and the staff of RM, all of whom worked tirelessly and patiently to solve any problems. I gained so much from my first RM User Group training weekend and look forward to many more in the future.

What did we do yesterday (or how User Group weekends do change!)

Barry Mawer

At the User Group training weekend this year I noticed that we had displayed a set of photographs of the weekend at Coombe Lodge in February 1983. I thought it might be revealing to look back in my file and compare the courses.

Both Woolley Hall (1991, near Wakefield) and Coombe Lodge (near Bristol) are country houses set in magnificent locations. They are both used as staff training centres and provide a very good standard of accommodation in a rural setting. In particular, both provided excellent food and a small but homely bar. Both venues failed to hold all who wanted to attend and an overspill had to be accommodatd locally.

I noticed several familiar names on the two attendance lists, including Peter Smith, Bernard Conning, Howard Kirkman, Roger Keeling, Maureen Wareham and Peter Butt. I looked with interest at the course fee but was surprised to find that we had charged £55 in 1983 which makes £150 this year seem good value.

In 1983 most of the courses had been demonstrations, the hands on approach did not arrive until the mid eighties. Several of us had taken DTI 380z systems (remember them?) plus some 480z standalone equipment. RM provided a 480z network. This hardware pales into insignficance compared to the array of equipment available at Woolley Hall and special thanks must be given to all who lugged computers to Yorkshire.

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The most popular course in 1983 was a technical one on Z80 assembler and the 1991 equivalent was probably Russell Prue with his 'Making the most of Windows'. There was a heavy bias towards programming options in BASIC and Pascal in 1983 which have totally vanished to be replaced with hands on courses involving Word for Windows, Excel and Superbase 4. Courses for network managers, beginners and advanced, were unnecessary in 1983 but are now a standard part of the modern weekend.

In 1983 Frank Large ran a popular and innovative Control option constructing a 'buffer box' which required much use of soldering irons and programming via the 3/480z user port. In 1991 we provided breadth with 'IT and the National Curriculum' run by Roger Whitfield and 'A Level Computing' run by Peter Butt.

Some things never change; in 1983 Peter Smith did the RM session and fielded the flak with Barry Taylor doing much the same job in 91. The evening sessions of CAL, Gino and WordStar were replaced in 91 by CAL, satellite and multimedia presentations.

I'm sure that the hands on application package courses will continue and I look forward to further evening presentations widening my awareness. The one thing I particularly welcomed this year was the introduction of a creative theme with Chris Jennings' 'Multimedia' and Lyndon Evans' 'Pagemaker and Design'. The omission I most regret was the hilarious Russell Prue/Peter Smith et al 'Saturday Evening Presentation'.

(For those of you who missed the early days of computing with RM, the 380z was a CP/M computer; when fully specified it had 56k of RAM, 2 floppy drives giving 160k each, 4 colour graphics at 320 x 192 or 16 colours at 160 x 96 and cost about £2000. It also weighed rather a lot more than most people would like to carry. The lowest spec machines had 16k or RAM a cassette port and teletext style graphics available in white and grey. The 480z was the successor machine and was among the earliest computers capable of being networked; the Chain network was released in about 1982)

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PageMaker and Design presented by Lyndon Evans

Les Watson

This workshop was not about PageMaker but about design. Lyndon delivered a well prepared talk before coffee giving delegates an insight into some of the ways in which readers attack our DTP efforts. Knowing about reading patterns is obviously useful to anyone putting a page together. There's no point in putting all your effort into the part of the page which only receives 15% of the readrer's attention. The second part of the workshop consisted of a hands on design project using PageMaker, Delegates were asked to direct their design flair at the problem of producing an exciting cover for RM User! (Steve Rochford thinks the current one is pretty exciting! Consequently in the interests of solidarity with the editor I decided to give the cover design exercise a miss). Full marks to Lyndon for turning the standard "this is how you use PageMaker" session into a useful insight into aspects of design. Those who attended will have no trouble producing readable, well structured documents from now on.

Multimedia - evening presentation by Chris Jennings

Ken Maynard

Chris was persuaded to give a mini version of his multimedia course on the Saturday evening for those who had to attend other sessions in the daytime. As usual, he quickly demonstrated his skill and enthusiasm for the software tools at his disposal and got everyone else excited about their possibilities.

The range of CDs is clearly increasing very rapidly and some of them are very good. The potential to mix graphics, text and sound is just about with us; in fact RM have a system in an advanced state of development. Interestingly, a book written by Chris when he first joined RM and had access to Aldus PageMaker, a scanner and laser printer for the first time is gradually being re-created in another guise; as a CD ROM. I wonder what form it will take next.

Our thanks to Chris for putting on this extra session for us.

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'Getting the Most out of Windows 3': Russell Prue

Ken Maynard

Russell gave one of his usual entertaining, high speed demonstrations of the capabilities of the computer. Not music this time, but the inescapable reasons for installing and using the MS-WINDOWS interface at all times. Firstly he listed the benefits of such an arrangement:

1 Icons rather than plain text

2 A consistent interface on all machines

3 Multitasking, including possibility of DDE

4 Intuitively driven using a mouse

5 Efficient memory management - breaks the 640k barrier.

6 On some machines can even use 'virtual' memory.

7 MS-Windows is growing into an industry standard

These notes were nicely displayed on a projector screen utilising a newish piece of Windows software from Powerpoint, a laptop and an OHP data display tablet.

Windows can be set up in three different modes:

REAL mode to cope with 'old style' programs that were not written for windows and expect to run in only 640k.

STANDARD mode - the normal way to run windows.

ENHANCED mode on a 386 or better where it can utilise virtual memory: that is it can augment RAM by spooling out material to the hard disk.

With any use of MS-Windows Russell recommended using SMARTDRIVE since any caching possibility will always give some performance improvement. Screen savers are helpful: programs, often shareware, that effectively switch off the screen when the computer has not been used for a while.

Dynamic data exchange (DDE), a feature of much Windows software was demonstrated by linking a section of an Excel spreadsheet to MS-Write to show the contents of a letter changing when the spreadsheet was updated.

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Russell sees one of the major benefits of Windows is its ability to be configured to suit any class of user and thus to simplify their interaction with the computer. The appearance of a Windows screen depends on just half a dozen files. Thus, if a special layout is designed these are all that have to be copied to an area or system to lock the user into the chosen framework.

There can be two different types of user: restricted and unrestricted. The principal difference is that the unrestricted user should adhere to the same type of machine on a network. The restricted user can use any machine since the windows interface will detect the type and construct an appropriate version of the interface.

Some readers may be interested to know that a switch driver is being worked on under the direction of NCET that will allow any Windows software to be controlled from a simple switch. The aim is to bring all programs within 'reach' of the physically handicapped.

The second half of Russell's session was devoted, of course, to hands-on working on a network at constructing groups and menus that would give the user access to a predetermined set of programs.

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RM Net LM

Steve Rochford

RM Net LM is RM's version of Microsoft's Lan Manager with significantly improved management tools and a Windows front end. What does it offer?

Lan Manager is a powerful network operating system, designed like most other network systems for use in the office. It never seems to have had the marketing push that Microsoft give to their other products (Word, Excel, MS DOS 5, Windows 3 and so on) and has had nowhere near the sales of Novell NetWare. This does not mean to say that it is not a good product; it does the job it is supposed to do very well. Why is it not suitable, then, for use in schools? The problem with moving office type networks to schools is that the environment is very different. In an office many people who use a computer will have their own machine on their desk. In the morning they will log on and then leave the machine logged onto the network more or less all day. It's also quite possible that the machine will have its own hard disc which is used for storing applications and the network discs are simply used to store shared data files or less commonly used applications and for things like EMail. In a school this is not the case. Any one machine is likely to be used by a large number of pupils in the course of a day and any pupil is likely to use a number of different machines in the course of a week. The machines are also less likely to have their own hard disc because of the extra cost involved. This means that the server must be capable of providing rapid response to users logging on, must have a relatively large amount of storage space and must cope with the fact that the same user will access files from different terminals; this should mean making sure that the appropriate printer is selected not by user but by location of the terminal.

Managing a commercial network is also likely to be less demanding for two reasons. Firstly, unless the company is very big, they will have less users registered on the network whereas a school with a thousand users would not be uncommon, and secondly there is likely to be someone responsible for running the system. In schools the person running the system is normally a teacher with just a small amount of time allocated for the management job.

RM Net has tried to address these problems over the years in a variety of ways and with varying degrees of success and LM builds on this. As before, each user has a connection to a public area, where applications and public data files are stored and to a user area where their own files are stored. Users are grouped together as before except that the group concept has been allowed to let the user choose their group at log on time. This means that during an English lesson they can log on as a member of the English group and during a Science lesson they log on as a Science group user.

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The network manager or group manager can specify the groups to which each pupil has access; you might want to set up an English group for each year group, for example, and you don't want year 6 pupils using the programs that are set up for year 11 and so on. This is the point at which you could also handle things like special printer setup. If you have a plotter attached to the network in the Technology department then logging on as a Technology group member would give you a connection to this.

RM Net LM supports remote booting, just as RM Networks have always done. There are a number of advantages to this. The boot up process is generally faster (data is read from the server's memory instead of from a slow floppy) and the system can be more secure (if you don't need to boot from a floppy then there is no need for a local disc drive on the machine). LM now supports parallel booting so that if a room full of stations is switched on simultaneously they will all read the same code rather than the server sending the same code individually to each station. You can also be sure that every user has identical boot code rather than having to update lots of discs every time you change the system set up in any way.

With standard Lan Manager it is quite time consuming to add a new user; you have to specify their access rights to every directory and if you get it wrong you can mess things up totally. RM Net LM uses a Windows program to make the whole thing much easier; in principle it is like Net 3 but (at last!) there are facilities to add users in bulk from external files. As users are created they are automatically allocated a password but when a user logs on they can now change their own password. RM's literature specifies that the administrator cannot view passwords; if a user forgets their password then the administrator can override the existing password and set a new one. This is a good idea but does this also mean that it is not possible to print an initial list of ids and passwords to give to users? I hope not! It is also possible to specify that the password must be changed after a certain period and it must be a certain minimum length. For security it is possible to restrict the use of the admin programs to certain stations (so that even if someone does find out how to log on as Network Manager they can't make changes to the system unless they are at the correct station.)

Also in the management system it is possible to set up printers. For each printer you specify not just where it is plugged in but what printer driver it needs. This means that when a user selects, say, a Deskjet printer they will also automatically get the correct printer driver. This should mean no more reams of PostScript on a dot matrix but I have to admit to being cynical. I **very** much want this to work but I don't see how it can, except for Windows programs, and it's generally easy to set up printers for them. It's the DOS applications that cause the most grief. I hope I'm proved wrong!

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Net 3 supports the use of dedicated stations to print files from specific queues so that you don't have to run very long wires from the server and you also take some of the load off the server. LM does not support this in the same way but does allow a background program to run on a station to do the same job but without having to dedicate a station. I've not seen this working so I can't comment on how successful it is. I think it will work well if just a few machines need to share a printer but in situations where you would previously have dedicated a station I think you will still do the same.

Still on printing, it's also possible to have multiple queues associated with one printer and multiple printers with one queue. The first case allows prioritisation of work; I print to the fast queue and everyone else prints to the slow queue so my job will always be printed as soon as possible (I like that idea!) whereas the second allows a busy room to have several printers printing from the same queue; an excellent idea. Queues can be set up to only work at certain times of day so you can make sure that only certain people use the printer. The system audits printer use; RM's information says that this would allow departments to be charged for the use of expensive printers. I can see this being useful but how does the system know what's been used? I would like to put a PostScript laser on the network and make a small charge for its use (to discourage people from printing first drafts and so on). Does the system scan through the data going to the printer and count how many times *showpage* appears? Does it simply tell you what volume of data has been printed (2kb of text roughly fills a page but it might be nearer 1Mb for graphics) I suppose that just knowing a user has used a particular printer is better than nothing but it doesn't tell me which user has either maliciously or accidentally just printed 50 pages of garbage! A good idea which I hope works.

A very useful addition to the network is an EMail system and when a user is created you specify their EMail rights. EMail allows you to not just send and receive messages but also to send whole files and even to specify the application that should be loaded for this file. RM see this as being useful with Courseware; a teacher can send mail to a group which gives some instructions on the work to do and, for example, an Excel spreadsheet. Reading the mail then gives a straightforward route into loading Excel and the necessary file. There are lots of nice features with mail (such as sending it First or Second class, copying the mail to multiple users etc) but I'm not convinced of its value. To be most useful it needs to be available to all users but it's then open to abuse by all users and could become just one more thing to monitor for misuse. We'll see!

A perennial problem has been the performance of the network. You can get reasonable performance with a Net 3 network if you have a powerful enough server with a big enough memory and hard disc, good cabling and a sufficiently small number of users but it's not ideal. RM Net LM uses various techniques to make the system faster. The first is to only use 386 or 486 servers (with the latter recommended) with a minimum of 8Mb of memory (16Mb recommended). Disc caching is used for both reading and writing which allows the server to spend more time doing useful work and less waiting for the hard disc. Write caching is often considered dangerous (if you have an 8Mb cache full of data waiting to be written and there is a power failure then you've got problems!) so RM now support the use of uninterruptible power supplies. The server itself now runs under OS/2 which is a true multi-tasking system; this allows more than one process to be handled at the same time so the server will never just sit there waiting for a disc to become ready, instead it can move on to service the next request. Performance is also improved by parallel booting of stations (although booting one station at a time still takes the same sort of time as a single station booting takes now but because the station boots into Windows it takes less time to get to do useful work than it does now).

Security is always a consideration for networks. We've come a long way since Net 1 and 2 (which really only nodded in the direction of security). Net 3 and 3.1 made things better and RM Net LM makes the whole thing as secure as you could hope. If someone tries to log on by guessing another user's password then the system logs this and after a certain number of attempts a message is sent to the administrator. The station is also logged off and will not accept further attempts to log on by anyone for a period of time. This period of time increases for each successive attempt to log on unofficially and makes it almost impossible to use "brute force" to crack a password. Files can have a list of authorised users associated with them so that they can only be viewed by authorised users; unauthorised users will not even know that the files exist. Lan Manager provides excellent audit facilities and these are available in RM Net LM. Any user logging on or off will have this fact recorded in the log. It is also possible to audit access to any (or every file) on the network but if you audit every file then the audit log becomes so huge that it is meaningless. It is, however, useful if you are trying to debug the installation of a program; if I remember rightly Lan Manager records the names of file which a user tries to open and whether or not it was successful. In this way you can see that an application is trying to open an overlay, for example, in the wrong directory and then just change an append statement or whatever.

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Data integrity can be improved by the use of disc mirroring or duplexing (the former uses two discs and controllers, the latter just two discs) and by the use of regular tape backups so if (when!) something goes wrong it is possible to restore it without too much trouble. RM now support the use of streamers on the server which can be accessed automatically by the server (so you can schedule your backup for midnight). RM recommend that you buy a streamer with the system; I think that recommend is an understatement because they supply the master copy on tape only!

The whole thing is only going to work well if you have a decent server to support it and RM have now released SystemBase servers to the schools market. These use 33Mhz 486 processors and have either 8 or 16Mb of memory and hard discs ranging from 170Mb to 1.3Gb with either a 120Mb tape streamer or 1.3Gb DAT (digital audio tape). Prices range from £4 000 (for a 386/8Mb/170Mb/no tape) to £8 000 (486/16Mb/650Mb/DAT). All prices include monitor, mouse, the full Educational Software Library and an Ethernet card; if you want Z Net (and it is supported) then you have to buy it as an extra. Upgrade prices from an existing Net 3 server are available but this involves buying a brand new server. I understand that if you have a VX 386 you will be able to upgrade so that you can run LM on it but no prices are available yet. There are going to be problems for users making the upgrade because the server needs its disc reformatting for OS/2's High Performance File System and then all the software installing; this might be a job for a field service engineer.

In conclusion, the package looks excellent. RM have put a lot of work into developing what looks like a good network which should do the job for at least a few years (but in this rapidly changing world who knows what will happen next year!) and have promised a shipping date of March; I am promised that that is March 1992. I hope it is and I want one soon!

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Software Library

Sheila Maynard, Software Librarian

I am very pleased to say that there is now some more software in the library. There are two disks containing Techpacks which we are allowed to distribute. Please note that this is only on condition that we do not expect RM to provide any support.

VOLUME 12
This contains Techpacks 1, 2, 3, 4, and 10 which are as follows:

TechPack 1
PC-186 Graphics Utilities

Contains several utilities for PC-186 Mode graphics. This includes an Aztec C Graphics Library, a Turbo Pascal Graphics Library and a Sprite Editor. The Sprite Editor will not work on X Series systems in PC-186 Mode.

TechPack 2
Prospero Fortran Graphics Library

Contains an extensive graphics library for Prospero Fortran for PC-186 Mode Graphics

TechPack 3
RM-Fortran Graphics Library

Contains an extensive graphics library for Ryan MacFarland Fortran for the PC-186 Mode Graphics.

TechPack 4
RM BASIC Extensions

Contains a collection of extensions for use with RM Basic. These include: C Extension; MASM Extension; DEFCHAR Extension; Printer dump Extension; IN/OUT Extension; Sub-Bios Extension; Timer Extension.

TechPack 10
Piconet Support

Contains Piconet support routines for BBC BASIC, Pascal, and control support via Piconet for RM Logo. The Piconet support routines are pieces of code which would be incorporated into users' programs who wished to access the parallel Piconet modules.

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VOLUME 13

Volume 13 contains Techpacks 5, 7, 9, 16 which are:

TechPack 5
Applications Utilities

A collection of utilities for Word, Multiplan v1 and Superfile. It includes a utility to allow Multiplan v1 to print £ signs, Multiplan £/# printing; Prospero Pascal and RM BASIC interfaces for Superfile; .BAS utilities for Superfile; and some new Word printer drivers.

TechPack 7
PC-186 General Utilities

Contains some utilities for the Nimbus PC-186 including a Font Editor, some Sound and Speech software, and some general utilities such as CLOCK.EXE, TREE.EXE, MEMSIZE.EXE, FDUMP.EXE.

TechPack 9
Russian characters for Word

Contains software which allows the use of the Russian character font in Word and output to an Epson FX printer.

TechPack 16
General DOS Utilities

Contains general utilities for MS-DOS/PC-DOS machines including DUMP.EXE (dumps files in various formats), FREE.EXE (displays free disk space), FT (displays total file space), WHERESD (displays the drive letter of the silicon disk).

Late News
Recently Peter Bishop kindly gave his 'Alpha' software to the library. This consists of AlphaPlot, AlphaCalc, AlphaStat, DeltaStat, DeltaPlot and the AlphaCalc Activity Pack. More details will follow in the next magazine.

Library disks are now £5 including the 3.5" disk.

For further information or software contact:

Sheila Maynard, 7 Wood Drive, STEVENAGE, Herts, SG2 8PA.

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Letters

I have got an old BBC buggy, as supplied by Economatics, with a 480z interface but software for the 380z. Does anyone have the 480z version of the software?

G D Tee, Ilkley Middle School, Valley Drive, Ben Rhydding, Ilkley, LS29 8PA

I am looking for a 3d CAD package for use on PC 386 computers and would also like some suggestions for any software such as word processors, spreadsheets etc. suitable for use on standalone PCs without a hard disc.

T K Boyd, 7 Nelson Close, Tangmere, Chichester, PO20 6FW

I'm afraid I don't know of a suitable CAD package; can anyone else help?

The low-level package is, perhaps, easier. I think that you can run Microsoft Works off a single disc and if you can then it would be suitable for all your problems. Failing that, possible packages are Locoscript PC (which is a port from the Amstrad word processor and I think was originally designed to allow users to upgrade easily), AsEasyAs (which is available as a shareware spreadsheet), Flexiwrite (this is quite cheap, even for a site licence. You might not get the dictionary on the floppy but the program fits. This would be a good choice if you are running the same program on the network). There was a program called Mini Office, originally produced for the BBC and later versioned for the PC. I think that this would run from floppies. It was made by Database Publications (PC Today etc. magazines) and again would be a good choice because it's fairly integrated. I don't know if you can still buy Multiplan but if you can then it would work, as would dBASE II or dBASE III (the former is painfully slow, the latter is just slow but it's also expensive). Other databases (if what you want is just flat file storage) are Quest and Masterfile PC.

Finally, you might try looking through some of the shareware / public domain adverts. Some of the packages are pretty good (but need hard drives) but I'm sure that there is stuff out there. Does anyone else have any ideas? Even though I use a PC186 at home it does have a hard disc so I can run Windows. There are going to be a lot of people who are still trying to use floppy only machines for a while yet and I would like to know what they are doing or how they can be helped.

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I've been asked to find out if there is a version of Modula 2 which will run under Windows 3 under an Nimbus PC186 network. RM don't seem to have heard of Modula (!) so can any members help?

Mr D Maley, St Mary's College, 191 Falls Road, Belfast BT12 6FE

Grey Matter at Ashburton, Devon TQ13 7DF (Tel: 0364 53499) sell the largest range of compilers I know of so they would be worth a try. Does anyone else have any ideas?

We have a 480z network which we have used since 1984 and have now bought some more PC386s to replace these and supplement our exisitng network. One package that we used on the 480z but now do not have available is Quest and some datafiles that went with it. Can anyone help?

I also want to be able to connect a 5.25" drive to a PC386 or, alternatively, to the external drive connector on a NB 340. Apart from buying a drive from RM is there any way to do this?

Quest is available for the PC 386 from the Advisory Unit, Endymion Road, Hatfield, Hertfordshire, AL10 8AU. The package now uses a different format to hold the data but I'm sure there is a package to convert the files once you have them on the right size disc. I have a PC186 with both sizes of drive and the XFERCPM software which allows the transfer of data; send me your data discs and I will copy it for you.

External drives from RM cost a **lot** of money; this is the next area of pricing which I would like addressing by RM. You can buy a 5.25" high density drive for about £50 if you shop around. A few pounds more should buy you a short length of ribbon cable and the connectors necessary to link this to the PC386 but it obviously won't fit into the PC's box and I'm sure you will invalidate your warranty if you do connect it. I'm not sure what the port on a 340NB looks like so I don't know what connects to it. The other option is to look for a drive which plugs into the parallel port. These are about £200 but can be used with any standard PC

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Using the File Print Merge command in Word for Windows

Steve Rochford

One of the most improved features of Word for Windows version 2 is the way in which it handles Print Merging. This article is aimed at the majority of us who are still using version 1 and tries to show some of the features available. Note that you must have selected Full menus from the View menu before this will work. and you can see better what is going on if View Field Codes is ticked.

The basic idea is that you have a standard document (for example a letter but in a school it might be a record of achievement or similar document) and a list of data which is to be joined with this to produce personalised letters. I find that the easiest way to create the main document is to type a "real" letter and then to mark on the printout the sections that will change in the individual letters. Give short names to each of these *fields* and you are then ready to create the data document. This will be a table which is has as many columns as there are fields and as many rows as people to write to. For example, when I moved recently I wanted to write to all the people like banks, building society, credit card company and so on to give them my new address.

In the top row of my data document I typed the field names:

refnum company add1 add2 add3 add4 add5

(You don't need to abbreviate the names but it does save typing)

On the next rows I type the data for each person, eg:

09876123 Barclays Bank 12 High St Ealing London W5 9BR

Obviously, you will need to work out your own field names and put in your own data. Note that it doesn't matter if the lines of the address are split at odd places; Word takes care of all this and it doesn't matter if you don't use all of the columns.

When this is finished save the file and go back to the main document. Click your mouse at the very beginning and choose Insert Field. Scroll through the list until you get to data and click on it. In the box at the bottom type the file name of your data document after the word data and then click OK. You must be careful with the file name. For example, if you saved the file as C:\LETTERS\NAMES.DOC then the name you type will be C:\\LETTERS\\NAMES.DOC note that the \ becomes \\ in the file name.

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Now choose File Print Merge from the menu. Set it to print record 1 to 1 to a new document. When it has done you can close the document it creates without saving it. What you have just done will have checked that you spelt the file name correctly and, more usefully, added the list of field names ready for the next session.

Now you should delete the sections that are going to be replaced by variable information. For example, my letter would have said something like

Account reference : 123456789

Delete the number and leave the cursor where the number was. Now choose Insert Field and scroll through the list to pick Reference. Now scroll through the list of bookmark names until you see the one you want (in this case it would be refnum) and click OK.

Repeat this process for each of the fields you want to use; remember to put spaces between fields if necessary.

When you are finished then use File Print Merge to create a new document again. Look at it on screen and if there are no mistakes then just use File Print to print it. (You can print straight to paper with Print Merge but if you make a mistake in setting up the data document then you can waste a lot of time and paper. This way is less wasteful). I also find it useful to print no more than about 10 records at a time; if the printer jams then it's easier to reprint the 10 then to work out how far you'd got and start from that point.

Choosing the field type ref rather than just inserting the name by pressing CTRL F9 has the advantage that you can call your fields anything you want. For example, you might want to use a title field (Mr, Mrs etc.) but if you do you will find that something strange gets printed if you just put {title}. This is because Word uses the title information from the summary box. Putting ref first tells it to use the bookmark you have defined.

Sometimes you don't want to do a lot of identical letters at the same time but you do want to send the same letter on different days. You could just save the letter the first time you type it and then just edit the name and address etc. next time you want to use it. A more elegant approach is to use the fillin field. If your letter starts something like

{fillin "Where is the letter going"}

Dear {fillin "What is the courtesy title}

then when you use Print Merge a dialogue box will pop up asking you for the address and the name to go after Dear.

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A similar field type is the one called ask. Here you define a bookmark field which can be used more than once; the fillin field enters the data into the letter at the point the code appears but the ask field should go right at the start and then the bookmark it defines can be used (as a ref field) as many times as wanted.

The if field type can be very useful for deciding what should be printed. For example, you may want a letter which can be used to refer to men or women without having to use "his/hers" or "he/she". If you define a field called sex and set this to M or F as appropriate in the data document then you can have sentences like:

{if sex = "M" "He" "She"} should remember to bring {if sex ="M" "his" "hers"} books with him .... and Word will print the correct term. Word evaluates the expression after if and if it is true then prints either the text in the inverted commas or up to the next space if there are no quotes (so this example could have been {if sex = M He She} but the quotes make it look clearer)

This can be used to good advantage to provide records of achievement. If your data file contains the name of each child and a code letter for each subject specifying, for example, the level they have reached then the main document can contain a whole series of sentences but only the appropriate ones will be picked out. The only thing to be careful of is that you cannot use quotes inside quotes otherwise the inner opening quote is treated as the closing quote instead.

If you want to save paper by printing more than one letter to a sheet (if it is a short letter then you could fit two or three two a sheet then you simply repeat the body of the letter as many times down the page as it will fit. At the start of each letter put the field {next} instead of a {data *filename*} field. This tells Word to read the next row of data from the file and use that.

This leads to a way of laying out labels for merge printing. There are sample templates supplied with Word which do just this (LBL2COL.DOT etc). If you didn't understand them before, have another look now and see if you can work out what they do. They assume that your data file has 4 fields; name, street, city and zip (postcode) but would be fairly easy to edit for a different layout. Notice the use of the NEXTIF to decide if there is any data to print; this does the same as NEXT if there is data but skips completely if there is nothing.

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Writing for the Magazine

I welcome submissions for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome.

This magazine contains a lot which I have written; I don't mind doing this but I'm sure things are more interesting when they're written by a variety of of people. I like getting letters that I can publish; remember you're not the only person whose stuck at a certain point with your computer, if you write in then the person who's just got past that stage will be able to help you. Similarly, if you have just solved a problem, even if you think it's trivial, then write and let us know how you did it; someone else is bound to be stuck at just that point.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a Nimbus (I think!). If you are using a 480z then I can take WordStar, Oxfordshire Write or plain text files and if what you are sending is short then a letter on good old fashioned paper is fine.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's discretion).

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

Rates

Back Cover **£100** Inside Cover **£60** Full Page **£50** Half Page **£30**

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These rates assume black-on-white, camera ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Classified ads must be pre-paid; cheques payable to RM User Group.

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Membership Form

Please use capitals

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I enclose a cheque payable to RMUG/order for £15 (£20 for overseas members). If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent.

In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential and we are registered as Data Users under the Data Protection Act.

Are your computers ☐ standalone ☐ networked

Please tick the areas in which you are interested.

☐ Word processing	☐ Spreadsheets	☐ Databases	☐ High Level Languages
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Please tick the best description of yourself or your institution

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Please send your form to:
Stephen Rochford, RMUG Membership Secretary,
FREEPOST, London W12 0BR

You may photocopy this form if you do not wish to cut your magazine.

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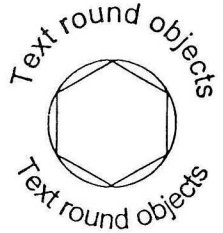
Desktop Publishing The Easy Way



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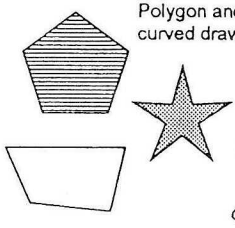

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